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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/180,432 02/12/99 MACHINO F 981361

023850
ARMSTRONG, WESTERMAN, HATTORI,
MCLELAND & NAUGHTON, LLP
1725 K STREET, NW, SUITE 1000
WASHINGTON DC 20006

IM71/0706

EXAMINER

RUDDOCK, U

ART UNIT

PAPER NUMBER

1771

18

DATE MAILED: 07/06/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/180,432

Applicant(s)
Machino et al.

Examiner
Ula C. Ruddock

Art Unit
1771



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on May 10, 2001

2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 35 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) 1-54 is/are pending in the application

4a) Of the above, claim(s) _____ is/are withdrawn from consideration

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) 1-54 is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirements

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

a) ☒ All b) ☐ Some* c) ☐ None of:

1. ☒ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. _____

3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

15) ☒ Notice of References Cited (PTO-892)

18) ☐ Interview Summary (PTO-413) Paper No(s). _____

16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

19) ☐ Notice of Informal Patent Application (PTO-152)

17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____

20) ☐ Other: _____

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DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on May 10, 2001 has been entered.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Objections

3. Claims 12 and 42 are objected to because of the following informalities: the use of the word "characterized" is objected to. The Examiner suggests the use of the word "wherein."

Claim Rejections - 35 USC § 103

4. Claims 1-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over McCullough, Jr. et al. in view of Takemura et al. (US 5,254,396). McCullough, Jr. et al. teach a fire retarding and fire shielding structural panel for a vehicle, comprising a composite composed of a thermosetting resin matrix containing a multiplicity of non-flammable carbonaceous fibers (abstract). Thermosetting resin include phenolic resins and melamine resins (col 3, ln 6-9). The length of the individual fibers are in the range of 0.5 to 20 mm and the diameter of the carbon fibers of the invention range from 2 to 25 microns (col 4, ln 20-28). The bulk densities of the batting range from 0.4 to 6 lbs/ft³ (6.4 to 96 kg/m³). McCullough's carbonaceous fibers are

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prepared by the method as shown by U.S. patent application Ser. No. 06/856,305 (col 2, ln 45-55). In 06/856,305, McCullough teaches carbonizing the fibers at a temperature between 600°C and 700°C. It is also conventional in the art to carbonize fibers at temperatures between 600°C and 1600°C. Therefore, the fibers of McCullough, Jr. et al. have some degree of non-galvanic corrosiveness. A composite with the structure shown by McCullough, Jr. et al. would have the same galvanic current, tensile strength, compression recovery rate, thermal conductivity, and vertical incident acoustic absorptivity as claimed in Applicant's invention because both the material of the present invention and McCullough's invention are composed of carbon fibers being bonded by a thermosetting resin. In addition, the presently claimed properties of galvanic current, tensile strength, compression recovery rate, thermal conductivity, and vertical incident acoustic absorptivity would have been present once the McCullough, Jr. et al. product is provided. Note *In re Best*, 195 USPQ at 433, footnote 4 (CCPA 1977). McCullough, Jr. et al fail to specifically teach the use of anisotropic pitch-based carbon fibers in the insulation material and the specific method of making the insulation material.

Takemura et al. (US 5,254,396) teach a carbonized fibers of anisotropic pitch type combined with a phenolic resin fibers to produce a carbon fibers structure in the form of a laminate (abstract). Carbon fibers of anisotropic pitch type are very useful by virtue of their high strengths and high moduli of elasticity (col 2, ln 25-27). It would have been obvious to one having ordinary skill in the art to have used Takemura's anisotropic pitch type carbonized fibers

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as the fibers in McCullough, Jr's fire resistant panel motivated by the desire to obtain a panel with increased strength.

Takemura et al. also teach a method of melt spinning anisotropic pitch to produce a pitch fiber that includes a spinning method wherein pitch is revolved at a high speed is sprayed into fine liquid pitch streams by the centrifugal force thereof to form a fibrous material therefrom (col 4, ln 4-18). It would have been obvious to one having ordinary skill in the art to have used Takemura's method of making the anisotropic pitch fibers on the carbonaceous fibers of McCullough, Jr. motivated by the desire to obtain a panel with cheaper processing costs.

With regards to claims 12 and 42, it would have been obvious matter of design choice to have dropped the carbon fibers from a height of at least 100 cm or higher onto a plane, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233. In the present invention, it would have been obvious to drop the carbon fibers from a height of at least 100 cm or higher onto a plane motivated by the desire to obtain a panel with randomly oriented fibers.

Response to Arguments

5. Applicant's arguments with respect to claims 1-54 have been considered but are moot in view of the new ground(s) of rejection.

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Declaration

6. The declaration under 37 CFR 1.132 filed April 4, 2001, is insufficient to overcome the rejection of claims 1-54 based upon McCullough, Jr. et al. (US 4,997,716), as set forth in the last Office action because it is not a fair comparison between the present invention and McCullough, Jr. et al.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ula C. Ruddock whose telephone number is (703) 305-0066. The Examiner can normally be reached Monday through Thursday from 6:30 AM to 5 PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's Supervisor Terrel Morris can be reached at (703) 308-2414.

Any inquiry of a general nature or relating to the status of this application should be directed to the group receptionist whose telephone number is (703) 308-2351.

Ula C. Ruddock *UCR*
Patent Examiner
Art Unit 1771
June 30, 2001

Elizabeth M. Cole
ELIZABETH M. COLE
PRIMARY EXAMINER